

A B S T R A C T S

Abstracts from the Poster Session of the 2016 American Massage Therapy Association National Convention

EFFECT OF MASSAGE THERAPY ON THE PROPRIOCEPTIVE SYSTEM OF AN AUTISTIC CHILD—A CASE STUDY

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Introduction: Children with Autism Spectrum Disorder (ASD) often have an underdeveloped or dysfunctional proprioceptive system, leading to significant motor skill delays and increased anxiety. There is not enough clinical research to indicate the efficacy of massage therapy on proprioceptive dysfunction in children with ASD, but if shown effective, massage therapy could offer a new intervention for this issue.

Objective: The objective of this case report is to describe changes in the proprioceptive abilities of a child with ASD after the application of eight massage therapy sessions over a four-week period.

Case Presentation: The subject of the case report was a five-year-old Caucasian female client with mid- to high-functioning autism and proprioceptive dysfunction. The client's proprioceptive dysfunction impairs gross motor planning and execution, creating gross motor developmental delays.

Intervention: Eight 40-minute massage therapy sessions, consisting of Swedish massage and foot reflexology, were administered twice a week over four weeks. The Swedish massage protocol utilized strokes stimulating to muscle spindle proprioceptive neurons. The foot reflexology focused on reflex points specific to the nervous system. Improvements in proprioceptive abilities were monitored through pre- and postmassage testing activities that included single foot balancing, jumping rope, back-and-forth ball bouncing, and independent ball dribbling.

Interpretation: The client displayed improvement in proprioceptive testing tasks at a much faster rate than her usual learning curve. Proprioceptive progress was demonstrated by gains in gross motor skills pertaining to postural control, overall body coordination, and use of force.

Implications: Although positive results were achieved within this case study, more extensive studies are needed to support the efficacy of massage therapy on proprioceptive dysfunction in children with ASD. Further research is needed to determine

which intervention in this case study, Swedish massage, foot reflexology, or the combination of the two, is responsible for the observed changes.

HOSPITAL-BASED MASSAGE THERAPY

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Introduction: An increasing percentage of hospitals are offering massage therapy to their patients. Massage therapy is the top CAM service provided on an outpatient basis. The Academic Collaborative for Integrative Health (ACIH, formerly ACCAHC) Hospital Based Massage Therapy Task Force was formed to explore the need for a set of standard competencies for the practice of massage therapy in hospital environments, given that no such standard resource exists. A standard set of competencies will be useful to hospitals, massage therapy schools, and massage therapists themselves.

Methods: The Task Force designed a survey which was distributed to a convenience sample of hospitals to assess various elements of their massage therapy programs.

Results: Thirty-two out of thirty-seven hospitals that received the survey completed it, resulting in an 87 percent response rate. With recognition of a small convenience sample, we believe the high response rate and the extent to which respondents provided in-depth information to the open-ended questions indicates interest in, and a recognized need for, HMBT competencies.

Conclusions: The wide range of responses relative to curriculum, orientation procedures, and competencies in general, suggests a need for standardization of competencies to support safe and effective HMBT services for patients. Next steps will be to work with educators and practitioners in the HMBT field to augment the ACIH Competencies for Optimal Practice in Integrated environments (<http://accchc.org/competencies>) and develop specific competencies for hospital-based massage therapy.

PILOT STUDY OF MIXED LIGHT TOUCH MANUAL THERAPIES ON SOLDIERS WITH CHRONIC POST-TRAUMATIC STRESS DISORDER AND INJURY TO THE HEAD

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Background: The objective of this study is to investigate the effects of Light Touch Manual Therapies (LTMT), such as Craniosacral Therapy (Upledger) and Brain Curriculum (Chikly) on soldiers with Post-Traumatic Stress Disorder (PTSD) and mild Traumatic Brain Injury (mTBI). PTSD and mTBI are pervasive in military and general populations. There is an overlap in some PTSD and mTBI symptomatology (e.g., anxiety, depression, fatigue); persistent headache is prevalent in mTBI. Treatment for PTSD and mTBI symptoms is often ineffective and accompanied by side effects.

Methods: Active Duty United States Service Members diagnosed with PTSD and accepted into an intensive outpatient program were screened for having a self-reported injury to the head at least two years prior. Twenty-seven Service Members were screened during eight months of pilot study recruitment, eleven participants with a positive screen were enrolled, and ten participants completed our pilot study. After obtaining IRB informed consent, all participants received two 60-minute sessions (one week apart) of mixed LTMT, including primarily Craniosacral Therapy (Upledger) and Brain Curriculum (Chikly). Self-reported data collected by paper and computer surveys (Patient-Reported Outcomes Measurement Information System [PROMIS] and Quality of Life in Neurological Diseases [Neuro-QoL]) were gathered before and after LTMT sessions. Twenty variables were examined for change.

Results: Headache, anxiety, and pain interference each significantly decreased (p values range from .008–.039, Cohen's d ranges from 0.82–1.27, $N = 10$). PTSD Checklist-Military version scores significantly increased ($p = .013$, $d = 1.21$, $N = 9$) possibly indicating exacerbated PTSD symptoms, not uncommon at the start of a treatment program. The other comparisons were not statistically significant.

Conclusions: Mixed LTMT may be helpful in reducing some symptoms of PTSD and injury to the head. Further investigation is warranted to determine if LTMT is an effective treatment for headache, anxiety, or other problems associated with PTSD or injury to the head. Also worth future investigation is whether or how changes in neuronal shape, a potential mechanism underlying effects of LTMT, cause long-term changes in the central nervous system, which in turn may affect symptoms such as headache, anxiety, or other physiological processes.

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EFFECTS OF MASSAGE THERAPY ON POSTOPERATIVE PAIN IN INFANTS WITH CONGENITAL HEART DISEASE

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Introduction: Pain management is essential for pediatric patients following cardiothoracic surgery. Massage reduces self-reported postoperative pain in adults with heart disease, but has received little attention in infants.

Objective: Examine the effect of massage on pain in infants following surgical intervention for congenital heart disease.

Methods: We used a two-group RCT design with a sample of 60 infants between birth and 12 months of age following cardiothoracic surgery. Group 1 received standard postoperative care plus a daily 30-minute period where nonessential nursing care was deferred. Parent interaction with infant was not restricted. Group 2 received standard postoperative care plus a daily 30-minute massage. Interventions continued for seven consecutive days. Pain was measured six times daily using the Face, Legs, Activity, Cry, Consolability Pain Assessment Tool (FLACC). Average daily analgesic dose was recorded. Descriptive statistics and GLMM repeated measures assessments of FLACC by group were calculated. Latent growth models of FLACC by group were created using fentanyl-equivalent narcotic values as a time-varying covariate each of the seven study days.

Results: Adjusted pain scores for fentanyl-equivalent narcotic were lower for massage infants on all but Day 7. Overall group effects on level and rate of change of pain were not statistically significant [$\beta_0 = -0.118$ (SE = 0.294), Wald test = -0.408 , $p = .687$ and $\beta_1 = -0.005$ (SE = 0.087), Wald test = -0.053 , $p = .958$, respectively]. However, specific contrasts for each day revealed that massage infants had lower pain scores with small to medium effect size differences, largest at Days 4, 5, and 6.

Conclusions: Although statistical significance was not reached, effect sizes demonstrated clinically important effects of massage on daily pain. This study provides beginning evidence this nonpharmacological adjunct to pain management may reduce pain in infants with congenital heart disease, providing a

particular benefit for this population by reducing demand on the cardiorespiratory system. Additional research is needed to further assess effects.

EVALUATING THE IMPACT OF GENERAL SWEDISH MASSAGE, CROSS-FIBER FRICTIONS, NEUROMUSCULAR AND MYOFASCIAL TECHNIQUES ON RANGE OF MOTION, SKIN SENSATION AND NERVE PAIN IN A THIRD-FOURTH DEGREE CHRONIC BURN VICTIM: A CASE STUDY

Nicole Gnadt, LMT

Objective: To determine if myofascial release, Swedish massage, neuromuscular therapy, and frictions performed local to affected bilateral chest, combined with pain free stretch and strengthen exercises, have an impact on pain, itch, anxiety, range of motion, sensory of the skin, and nerve pain in a chronic burn victim. The goal is to decrease adhesions, hypertonicity, improve tissue elasticity in the client's bilateral chest area, and restore range of motion to the bilateral glenohumeral joints.

Case Selection: A Caucasian male, aged 30 years, with no history of illness nor use of other therapies, who has a chronic third-fourth degree burn to his bilateral chest and the right side of his neck. The client has a full thickness graft in the form of an oval shape to the middle section of his throat and normal skin grafts to his bilateral chest and the right side of his neck

Methods: Seven 60-minute treatments were conducted, twice a week. Prior to each treatment, 30-minutes of assessments were collected, including the McGill pain questionnaire, state trait anxiety form, and active/passive range of motion tests. Resisted muscle testing, pec contractor test, a two-point discrimination test, and a modified nerve pain test were done prior to the first treatment and after the seventh treatment. The 60-minute massage treatment consisted of myofascial release, neuromuscular therapy, Swedish massage and cross-fiber frictions. Home care recommended included the use of a stretch and strengthen exercise with a moisturizer.

Results: The client had a significant increase in nerve pain and skin sensation to his chest bilaterally. Upper/middle trapezius strength increased, as well as range of motion of his bilateral glenohumeral joints. The client had a significant decrease in the McGill pain score and itch with use of certain massage techniques. Following the seventh treatment, the pec contracture test was negative, but no difference was found in state trait anxiety.

Conclusion: Massage was beneficial in reducing itching and pain levels, as well as increasing overall

range of motion, nerve pain, and skin sensation in a third-fourth degree chronic burn victim.

CHRONIC ANKLE INSTABILITY (CAI), CLINICAL REASONING AND RESEARCH LITERACY: A CASE REPORT

Rosi Goldsmith, BA, LMT, DAFNS

Introduction: Ankle sprains comprise up to 85% of athletic injuries. Most heal without consequences. Chronic ankle sprains, especially in sports, can result in more proximal complaints. A perception of instability and sensorimotor deficits are key symptoms of chronic ankle instability (CAI).

Objective: To note how clinical reasoning and research literacy reframed a clinical focus CAI that improved outcomes and patient satisfaction.

Case Presentation: A 48-year-old athletically inclined corporation middle manager had a history of sports injuries. After multiple prior treatments, including two knee surgeries, she still experienced restriction in her ability to walk, run, stand, squat, or engage in sports. The patient's initial complaint was knee pain.

Interventions: Ortho-Bionomy® (O-B) techniques were initially applied to hypertonic, painful muscles around the knee and proximal to it, in seven sessions over four months. The practitioner surveyed the research and found that patient self-report of lower limb instability is an indication of CAI, despite absence of pain at the anterior talofibular ligament (ATFL). Positive anterior drawer and talar tilt tests suggested a change of focus to the ankle. O-B for ATFL and calcaneofibular ligaments was applied in three sessions. Four months later, the patient presented with re-injury, and practitioner found new research recommending massage techniques for CAI sensorimotor deficits. Practitioner assessed ATFL pain by palpation and pinwheel tests, and found diminished sensation and changed frequency, dosage and methods. In 11 half-hour sessions over four weeks, practitioner used O-B for proximal fibula and hypertonic lower leg muscles plantar fascia massage, ankle isometric, and isotonic exercises to increase proprioceptive awareness and improve ankle biomechanics to prevent re-injury.

Results: Following the first four months of treatment, the patient reported diminished knee pain, but a perception of instability. The fifth month, with ankle-focused sessions, increased the patient's perception of stability, but did not prevent re-injury. The last series of treatments four months later, the patient reported increased proprioception, "I can be mindful of how I use it", "Feel close to normal", "I am excited about getting my body back", "I just thought it was my knee", "Now I'm noticing the healing."

Implications: Massage practitioners may apply clinical reasoning skills, assessments within their scope of practice, and research literacy to target physiological dysfunction that is not immediately obvious or reported by the patient.

DISABLING SHOULDER PAIN TREATED BY CONTRALATERAL ISOMETRICS WITH IPSILATERAL ORTHO-BIONOMY, MASSAGE AND VISUALIZATION: A CASE REPORT

Rosi Goldsmith, BA, LMT, DAFNS

Introduction: Shoulder pain is the third most common musculoskeletal condition, with high social-economic costs. Contralateral inhibition (CI) has been used to treat a limb affected by stroke and to prevent unilateral overuse sports injuries, but is not well researched for pain treatment. This is the first such case report on CI for disabling shoulder pain.

Case Presentation: The patient was a married, 45-year-old, right-handed male, with a three-year history of right shoulder pain following a traumatic injury. The slightest touch or use of his right arm exacerbated the pain for days and interfered with all aspects of his daily life. Previous treatment included surgery, psychotherapy, pain management training, physical therapy, and chiropractic. He took analgesics, and wore an advanced transcutaneous electrical nerve stimulation (TENS) unit for approximately 2 hours daily.

Methods: The practitioner identified the most painful tissues in the affected right arm, then applied isometric and very slow isotonic contractions to homologous left arm muscles. The patient's wife was recruited to assist with daily home exercises. The practitioner applied cross-fiber friction, myofascial release, and proprioceptive exercises to the right arm when direct touch became tolerable. The patient recorded VAS pain scales at each session and kept a weekly frequency/duration log of TENS unit use. The practitioner charted verbal narratives on other changes the patient experienced.

Results: Following 12 clinical sessions in 24 weeks, the patient had a 50% VAS reduction in between-session pain, and TENS unit usage dropped from 13–14 hours per week to none. The patient reported improvements in sleep and confidence, as well as resumption of normal home and family activities. He also reported that he was able to return to work for the first time in three years.

Conclusion: Physical therapy research has documented CI with “neurological crossover” effects, but it is not well researched. A prospective study could choose more appropriate rating scales and determine when CI treatment might be most effective. This case suggests massage therapy may be beneficial for some

cases of severe unilateral pain, but additional larger scale studies are needed.

MASSAGE, BODYWORK AND MIND-BODY INTERVENTIONS FOR PARKINSON'S: A CASE REPORT

Rosi Goldsmith, BA, LMT, DAFNS

Introduction: Parkinson's Disease (PD) is a progressive neurodegenerative disorder, with symptoms of rigidity, tremor, postural instability, and bradykinesia. Sleep disorders, fatigue, emotional issues, and cognitive changes are some nonmotor symptoms (NMS) which negatively impact quality of life (QoL).

Objective: Research done within various populations using massage, focused exercise, mind-body practices, and imagined movement have shown benefits to associated brain areas, emotional issues, and/or motor symptoms implicated in Parkinson's. No previous studies have investigated these combined therapies for PD patients. This study asks whether a multimodal program could affect PD symptoms.

Case Presentation: A 63-year-old male with PD 5 years postdiagnosis, was taking Sinemet. Patient identified goals of pain relief, improved mobility, slowing of PD progression, and symptom control. Initial assessment showed moderately stooped posture, mild-to-moderate rigidity of neck and major joints, bilateral pain at shoulders, and impaired balance.

Methods: Fifty-six bodywork sessions over eight months included: massage, orthobionomy; mindfulness and interoceptive awareness training; and neurological exercises including single leg stand and vertical eye saccades. A home program was developed from clinical practices, with adapted yoga, meditation, and mental rehearsal of his exercise/yoga routine. Joint range of motion (ROM), balance, and eye saccades were assessed clinically throughout the study. Pain, motor and NMS, and QoL were assessed by validated instruments: Visual Analog Scale (VAS), Non-Motor Symptom Scale (NMSS), PD Quality of Life-39 (PDQ-39), Modified PDQoL (PDQoL), and Unified Parkinson's Disease Rating Scale (UPDRS).

Results: ROM, balance, and eye saccades improved based on clinical assessments. VAS of pain showed a decrease from 7/10 to 4.5/10. PDQ-39 showed an 11.5% overall improvement, with the largest subscale improvement in Activities of Daily Living (ADL) (33%). PDQoL demonstrated notable subscale improvements of Emotional Functioning (12.5%) and Parkinsonian Symptoms (21.6%). NMSS showed a 26% overall improvement, with specific domain improvement in Sleep/Fatigue (10%). UPDRS showed notable improvements in Motor Examination (15%). Patient reported he could often calm “off” symptoms of fatigue, tremors, and RLS by meditation

and exercise/yoga mental rehearsal, resulting in improved sleep, confidence, and self-satisfaction.

Implications: Multiple therapies and medication changes may have introduced confounding variables, and variations in Parkinson's symptoms and massage clinical practice make it hard to reproduce. The possibility of benefits to QoL and NMS suggests a controlled study using multiple evidence-based modalities, including bodywork, might be worthwhile.

THE EFFECTS OF MASSAGE THERAPY ON PHYSICIAN SUSPECTED FETAL ALCOHOL SPECTRUM DISORDER: A CASE STUDY

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Background: Fetal Alcohol Spectrum Disorder (FASD) is a term used for a wide array of growth, mental, and physical problems that can occur to a baby if the mother drinks while pregnant. Symptoms can include smaller physical features and stature, poor coordination, hyperactivity, and difficulty with attention span and communication. There is currently no specific treatment for FASD; however, parents may seek medical care from a variety of specialists, medications, behavior and educational therapy, and/or complimentary therapies such as massage.

Objectives: To determine the effects of Swedish massage on the behavior of a two-year-old boy with physician-suspected FASD.

Case Presentation: The patient is a two-year-old boy, small in stature, with abnormal facial features, chronic ear problems, and developmental difficulties who regularly works with hearing and speech specialists. According to the guardian, the child's mother had admitted to drinking throughout her pregnancy. The child's physician suspects FASD, but he is currently on a waitlist for additional testing by a specialist.

Methods: The patient was given 10 approximately 30-minute Swedish massage treatments. Palpation, postural assessment, and muscle testing were conducted by the therapist. Subjective measures of behavior and emotional levels were collected from both the patient and the guardian. These measures included the FACES Rating Scale and behavioral questions inquiring about interactions with others, distraction during tasks, and toe walking. Assessments were primarily collected before the first treatment, after the fifth treatment, after the last treatment, and one week later.

Results: The therapist noticed a decrease in hyper-tonicity in the child's bilateral Tricep Surae group and increased strength in the Tibialis Anterior muscles. Decreased behavioral outcomes included toe walking, throwing of toys, aggressive behavior, getting over-emotional, and fidgeting during mealtime. However,

taking toys away from others and mimicking bad behavior remained the same. The FACES Rating scale responses were unreliable and only served to help the child reflect and improve communication.

Conclusion: The findings from this case study demonstrate the possibility of massage as a treatment to assist with improving behavior problems in a 2-year-old with FASD; however, additional larger scale research with more standardized assessments needs to be conducted.

CASE REPORT: MANUAL THERAPIES PROMOTE MOBILITY AND CONTINENCE IN AN ADULT WITH CEREBELLAR AGENESIS

Susan Vaughan Kratz, OTR, CST

Introduction: Cerebellar agenesis is a rare condition in which the brain develops without a cerebellum. Individuals with either congenital or acquired cerebellar agenesis often have significant impaired mobility, and function, sensory motor deficits, speech, and often other cognitive impairments.

Objective: This case reports on the results of using CranioSacral Therapy (CST) to treat an adult female with cerebellar agenesis and other congenital malformations.

Case Presentation: A 22-year-old female with congenital cerebellar agenesis presented to a private therapy clinic for treatment of chronic pain following spinal surgery which occurred six years prior. The patient had life-long movement disorder; cerebellar ataxia; neurogenic bowel and bladder dysfunction; and required maximal assistance for walking, standing, and changing position due to pain and lack of strength, balance, and control. The treating therapist noted extreme athetosis of the head, neck, and shoulders, and a significant keloid scar along the posterior vertebral surface.

Intervention: Ninety-one, 45–60 minute, CST sessions were conducted over a four-year period with minimal/occasional use of proprioceptive neuromuscular facilitation, myofascial release, scar reduction techniques, and lymphatic drainage. The primary goal was relief of chronic pain, but shifted to a general health and wellness focus when that goal was attained.

Results: Following 18 sessions of CST within the first six months, the primary goals of pain relief were attained. The patient's mother reported this as "the only therapy she has ever attended where she indicates receiving comfort. She appears motivated to come and I know she feels better and her mood is better." After four years, CST also contributed to marked improvements in functional movement skills and unexpected attainment of fecal continence. The patient's mother again reported, "She

has started to be able to go to the bathroom and is now using the toilet and is independent with her bowel control now. It's a huge impact that we are all very happy about."

Conclusion: Clinical significance of these outcomes arouses curiosity about the type of stimulation CST provides to the central nervous system and any effect upon neuroplasticity.

VOLUNTEERISM OF MESSAGE THERAPISTS: A MASSAGENET STUDY

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Introduction: Volunteerism among physicians, nurses, and other health care professionals has been described in the literature. To our knowledge, there is currently no published literature regarding the volunteerism of massage therapists.

Objective: The aim of this study was to describe the volunteerism activities, motivations, and barriers for massage therapists.

Methods: Practicing massage therapists in the United States were recruited through MassageNet, a practice-based research network, to take a survey containing questions regarding volunteerism. Participants took a survey containing questions regarding professional, volunteerism, and personal characteristics. Specific volunteerism questions addressed if volunteering was massage or nonmassage-related, motivations, barriers, and their primary role including direct service, administrative/organizational, or fundraising. This was intended to serve as a preliminary assessment using a small sample of therapists and is not representative of the massage therapy profession.

Results: Of the 96 massage therapists who completed the survey, in the past year 27 participated in only massage-related volunteering, 12 participated in only nonmassage-related volunteering, 37 participated in both massage- and nonmassage-related volunteering, and 20 did not volunteer. The most commonly reported motivations for volunteering include the enjoyment of the activity (67.7%), desire to contribute to betterment of society (59.4%), and desire to give back to society (56.3%). The most commonly reported barriers for volunteering include not having enough time (62.5%), organizational restrictions (38.5%), and personal health concerns (20.8%). For those who participated in massage-related volunteering, the most commonly reported settings included social and community service groups (40.6%), hospital, clinic or health care organization (37.5%), and health research or education organizations (34.4%). The most common

population specified was cancer patients (15.6%). Of the 64 participants who participated in massage-related volunteering, the majority engaged primarily in direct service volunteering (46.9%).

Conclusion: The majority of massage therapists surveyed participated in volunteer work during the past year, primarily with social and community groups in a direct service role. Service is important to various sectors of the massage community; therefore, recognizing the benefits and barriers to volunteerism for massage therapists may enhance participation and impact the profession positively.

INTEGRATING BODY-ORIENTED THERAPY PRACTICES IN TRAUMA INFORMED CARE

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Introduction: Trauma is, by definition, unspeakable and unbearable. Trauma interferes with language and the fight/flight response. Counseling and mental health treatments for trauma may incorporate embodied practices, including massage therapy and movement. A review of available literature across disciplines was conducted to investigate evidence of benefit of this integration. Body-oriented therapy needs to be defined, evidence-supported practices for use in trauma work identified, and supervision and ethical considerations for body-oriented practitioners developed.

Objectives: (1) Identify evidence-supported practices that may be effective in trauma work. (2) Identify preliminary best practices utilizing body-oriented therapy. (3) Identify supervision and ethical considerations for body-oriented practitioners.

Methods: A review was conducted of available books, journal articles, dissertations, reviews and research articles from 1996–2015 accessing databases and collections available through Johns Hopkins University Catalyst—including, but not limited to, publications from mental health, psychology, psychiatry, neuropsychology, neuroscience, massage therapy, public health, epidemiology, and trauma. 158 publications were identified and reviewed for basic supporting science, treatment effectiveness specific to trauma symptomology, preliminary evidence, current best practices, and ethical and supervision considerations in body-oriented trauma-informed care.

Results: The review indicated that body-oriented therapies may be categorized into no-touch or near-touch therapies, movement therapies, and touch therapies. Pilot studies with torture, trauma, and sexual abuse survivors, as well as other findings, although limited, suggest that body-oriented therapy may play a unique role in the path toward embodiment for trauma survivors. Ethical and supervision issues

were identified and guidelines developed based on best practices to date.

Conclusion: Body-oriented therapies show promise in helping reconnect the body sensations with emotions, reduce anxiety, improve restorative sleep, and help clients create and repair functioning connections to body awareness and emotional control that were damaged during trauma. A number of supervision considerations need to be addressed when working ethically with vulnerable populations of trauma survivors.

UTILIZING CHAIR MASSAGE TO ADDRESS ONE WOMAN'S HEALTH IN RURAL GHANA WEST AFRICA: A CASE REPORT

Cathy Meryanos, LMT

Background & Objectives: There is limited access to health care in rural Ghana and virtually no rehabilitative services available. This situation presents a unique opportunity to utilize chair massage in addressing women's health in rural Ghana, particularly when it comes to muscle pain and fatigue from heavy labor. The objective of this case report is to determine the results of chair massage as a strategy to reduce neck, shoulder, and back pain, while increase range of motion.

Case Presentation: The patient is a 63-year-old Ghanaian female, who was struck by a public transport van while carrying a 30–50 pound load on her head, two years prior to the massage. The accident resulted in a broken right humerus and soft tissue pain. A traditional medicine practitioner set the bone, however there was no postaccident rehabilitation available. At the time of referral, she presented complaints of shoulder, elbow, and wrist pain. In addition, she was unable to raise her right hand to her mouth for food intake.

Results: The results of this case report include an increase in range of motion, as well as elimination of pain in the right shoulder, elbow, and hand. A visual assessment showed an approximate ROM increase within the range of 45–65 degrees in the right arm and 10 degrees in the 4th and 5th fingers. There was also a decrease in muscle hypertonicity in the thoracic and cervical areas, and a profound increase in quality of life for the patient.

Discussion: This case report illustrates how therapeutic chair massage was utilized to address a common health concern for one woman in rural Ghana. It also demonstrates pre-existing musculoskeletal disorders and pain may be eliminated with massage intervention. Massage therapy may be important to ameliorating certain types of health problems in remote rural villages in low-income countries.

A DECADE OF BUILDING MASSAGE THERAPY SERVICES AT AN ACADEMIC MEDICAL CENTER AS PART OF A HEALING ENHANCEMENT PROGRAM

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The use of complementary and integrative medicine therapies is steadily becoming an integral part of health care. Massage therapy is increasingly offered to hospitalized patients for various conditions to assist with the management of common symptoms such as pain, anxiety, and tension. This poster summarizes a decade of building the massage therapy service at a large tertiary care medical center, from the early pilot studies and research to the current program offerings, and the hopes and dreams for the future.

ONLINE STUDENTS WANT MORE... TEACHERS?

Susan G. Salvo, MEd, LMT, BCTMB

Purpose: Student satisfaction is one of the five pillars of quality online education. In 2015, nineteen percent of massage schools offered online courses for their entry-level programs. If trends in massage education follow colleges and universities, this number will increase. The purpose of this study was to gain a deeper understanding of how students perceive their online educational experiences. Educators and administrators are interested in this topic as satisfied students are more likely to achieve academic success, less likely to drop out, and more likely re-enroll in future online courses.

Methods: Studies, reports, and textbooks were obtained using scholarly databases. Keywords used during searches were: online, distance, learning, education, student, perception, attitude, university. Inclusion criteria were participants must be students of higher education and must have completed at least one online course. Publication dates must be prior to January 2000. Studies that examined faculty perceptions were excluded. Data gathered from 34 sources were used during analysis.

Results: Students cited flexibility and convenience as primary reasons why they choose online courses. Learning management systems (LMSs) were important to online course implementation. The most valued LMS features were uploading assignments and utilizing digital resources such library databases. The least valued feature was discussion boards. Students had a strong preference for courses that were

well-organized. One consistent finding was students felt there was a lack of teacher presence, inadequate teacher feedback, and time intervals between student inquiry and teacher response were excessive. These experiences produced feelings of anxiety among online learners.

Conclusion: Students enjoyed their online learning experiences overall. Teacher presence was an

important contributing factor that improved student satisfaction. Teachers help create substantial learning experiences for students learning online by stimulating and directing discussions, asking probing questions, clarifying misconceptions, and emphasizing key concepts.
